

Thus, having disclosed this invention, what is claimed is:

1. A printer having a plurality of print media paths therethrough, said printer further comprising:

- (1) a printer device;
- (2) a first print media path that carries a sheet of print  
5 media from a sheet pickup mechanism to the printer device;
- (3) a second print media path that carries the sheet from the printer device to a sheet exit opening;
- (4) a third print media path that carries the sheet from the sheet exit opening back to the printer device;
- 10 (5) a housing having:
  - (a) at least one sheet entry opening through which a sheet can be delivered to the first print media path, and
  - (b) at least one sheet exit opening through which the sheet can be dispensed from the housing after said sheet  
15 travels, in a first flow direction, past the printer device and a sheet diverter;
- (6) the sheet diverter having a first operating position for allowing the sheet to pass, in the first flow direction, and a second operating position for diverting the sheet, while said sheet travels in a  
20 second flow direction, toward the printer device; and
- (7) a sheet pickup mechanism having a first operating position wherein said mechanism picks up the sheet from a sheet dispensing tray, and a second operating position wherein said mechanism serves as a part of a duplex printing path when the sheet  
25 travels in the second flow direction, toward the printer device.

2. The printer of claim 1 wherein the housing has at least two sheet entry openings through which a sheet can be delivered for transport to the printer device.

3. The printer of claim 1 wherein the housing has three sheet entry openings through which a sheet can be delivered for transport to the printer device.

5 4. The printer of claim 1 wherein the sheet pickup mechanism comprises a belt and roller mechanism having a first operating position wherein the belt drives a sheet toward the printer device and a second operating position wherein said belt carries an individual sheet over a part of a duplex printing path.

5 5. The printer of claim 1 wherein the sheet diverter is pivotally mounted so that, in its first operating position, a sheet traveling in the first flow direction, will not collide with said diverter and so that, in its second operating position, a sheet traveling in the second flow direction will collide with said diverter and be diverted toward the printer device.

6. The printer of claim 1 further comprising a sheet collection tray that services the sheet exit opening.

7. The printer of claim 1 further comprising two sheet dispensing trays that are each serviced by a separate and distinct sheet pickup mechanism.

8. The printer of claim 1 wherein a second sheet entry opening, the printer device and the sheet exit opening are on substantially the same horizontal plane such that a sheet passing over said horizontal plane is not bent more than about 30°.

9. An electrophotographic printer having a plurality of print media paths therethrough, said electrophotographic printer further comprising:

- (1) an electrophotographic printer device;
- 5 (2) a first print media path that carries a sheet of print media from a sheet dispenser tray to the electrophotographic printer device;
- (3) a second print media path that carries the sheet of print media from the electrophotographic printer device to a sheet  
10 exit opening;
- (4) a third print media path that carries the sheet from the sheet exit opening back to the electrophotographic printer device;
- (5) a housing having:  
15 (a) a first sheet entry opening through which a sheet of print media can be delivered from a sheet dispensing tray to the electrophotographic printer device,  
(b) a sheet exit opening for (1) dispensing the sheet of print media from the housing after said sheet travels past a  
20 sheet diverter in a first flow direction, and (2) permitting the sheet to pass back through the sheet exit opening in a second flow direction in order to collide with, and be diverted by, said diverter toward the electrophotographic printer device,  
(c) a second sheet entry opening through  
25 which a sheet can be delivered to the printer device and exit opening at a level such that the sheet does not undergo a bending angle of more than about 30° and  
(d) a third sheet entry opening through which a sheet can be delivered to the sheet dispensing tray;
- 30 (6) a pivotally mounted sheet diverter having (1) a first operating position that allows the sheet to pass through the exit opening when said sheet is traveling in the first flow direction and (2) a second operating position for causing the diverter to direct the sheet toward the electrophotographic printer device as it travels in the  
35 second flow direction; and

40 (7) a belt and roller sheet pickup mechanism having a belt that passes over two rollers and having a first operating position wherein said belt drives the sheet toward the printer device and a second operating position wherein said belt carries the sheet over a portion of a sheet transport path used in a duplex printing operation.

10. The printer of claim 9 wherein the sheet diverter employs a pivot device to present a surface that guides a leading edge of a sheet traveling in the second flow direction toward the electrophotographic printer device.

5 11. The printer of claim 9 further comprising a belt and roller sheet pickup mechanism that, in a first operating position, removes a top sheet from a stack of sheets in a sheet dispensing tray positioned adjacent to a first portion of a sheet flow path such that a first side of said sheet receives printing from the printer device and, in a second operating position, serves as a portion of a print media path that serves to turn over the sheet in order to receive printing on its second side.

12. The printer of claim 9 further comprising a first sheet dispensing tray that is serviced by the sheet pickup mechanism.

13. The printer of claim 9 further comprising a second sheet dispensing trays that is serviced by a separate and distinct sheet pickup mechanism.

14. The printer of claim 9 further comprising a sheet collection tray that services the sheet exit opening after a sheet receives simplex printing and after a sheet receives duplex printing.

15. The printer of claim 9 wherein a second sheet entry opening, the printer device and the sheet exit opening are on substantially the same horizontal plane such that a sheet passing over said horizontal plane is not bent more than about 30°.

16. The printer of claim 9 further comprising a third sheet entry for delivering a sheet to the sheet dispensing tray.

17. A method for increasing the versatility of a printer, said method comprising:

- (1) locating a printer device in a printer housing;
- (2) providing a plurality of media paths that pass  
5 through the printer housing and printer device;
- (3) providing at least one sheet entry opening through which a sheet can be delivered to the printer device;
- (4) providing the housing with (a) at least one sheet exit opening for (1) dispensing a sheet from the housing when said  
10 sheet travels past the sheet diverter in a first flow direction and (2) permitting a sheet to travel past the sheet diverter in a second flow direction leading back toward the printer device;
- (4) positioning a sheet diverter in the housing such that, while in a first operating position, the diverter can facilitate  
15 passage of the sheet out of the exit opening and such that, while in a second operating position, the diverter can direct the sheet in a second flow direction toward the printer device; and
- (5) positioning a sheet pickup mechanism in the housing such that, in a first operating position, said pickup mechanism  
20 drives a sheet toward the printer device and such that, in a second operating position, said sheet pickup mechanism serves as a part of a duplex printing path through the printer.

18. The method of claim 17 wherein the sheet pickup mechanism operates from a first operating position wherein said mechanism removes a sheet from a sheet dispensing tray and directs said sheet toward the printer, and (2) operates from a second  
5 operating position wherein said pickup mechanism carries the sheet over a portion of a duplex printing path through the printer.

19. The method of claim 17 wherein successive sheets of paper are introduced into the printer from a sheet dispensing tray, carried through a printer device and delivered to a sheet collection tray in a simplex printing operation.

20. The method of claim 17 wherein a sheet receives printing on a first side and then is driven in a second flow direction in order to collide with, and be directed by a diverter to a belt and roller sheet pickup mechanism in a manner such that said sheet can  
5 receive printing on its second side.